



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/573,486

03/24/2006

Masashi Harada

127488

9279

25944 7590 09/23/2008
OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,486	Applicant(s) HARADA ET AL.	
	Examiner Ling Xu	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/26/06 and 4/21/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 1-7 provides for the use of a recycled raw material, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

It is noted that the preamble of claim1 states that the claim is directed to a method of producing a honeycomb structure, yet none of the claims set forth any steps forming such structure.

The claims set forth only article limitations and uses phrases such as "is pulverized", "is added", and "is kneaded" to describe how the material for the honeycomb structure was made. However, as recited these phrases do not clearly set forth any process steps but merely appears to suggest structural limitations to the material in a manner similar to a product-by-process format.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 7,132,066 in view of Otsuka et al. (WO 03/048073, see its US equivalent, U.S. Pat. No. 7,208,108, for translation).

The claims in the US patent ('066) disclose a method for producing a honeycomb structure comprising: adding a recycled raw material from a recovered material generated in a process for making another honeycomb structure and grinding the recycled raw material so that the recycled raw material has an average particle diameter of 10-2000 microns. The claims 1-9 of the US patent do not specify that the honeycomb is made of silicon carbide material.

Otsuka teaches a method of making a honeycomb structure comprising a step of kneading raw material including a ceramic raw material and a processing aid such as binder to prepare a clay body (see translation, col. 3, lines 10-30). Otsuka also teaches that cordierite ceramic material and silicon carbide ceramic material both can be used as the main component for making honeycomb structure. Silicon carbide is preferable from the viewpoint of thermal resistance (see translation, col. 5, lines 25-45).

Therefore, it would have been obvious to one of ordinary skill in the art to use silicon carbide as a main component for forming honeycomb in order to provide the honeycomb structure with better thermal resistance.

4. Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 and 13 of copending Application No. 10/717,502 in view of Otsuka et al. (WO 03/048073, see its US equivalent, U.S. Pat. No.7,208,108, for translation).

The claims in the copending application ('502) disclose a method for producing a honeycomb structure comprising adding a recycled raw material from a recovered

Art Unit: 1794

material generated in a process for making another honeycomb structure and crushing the recycled raw material so that the recycled raw material has a maximum particle diameter of 50 mm or smaller. The crushed recycled raw material is added in an amount of 30% or less by mass of a whole starting raw material. Claims 1-10 and 13 of the copending application do not specify that the honeycomb is made of silicon carbide material.

Otsuka teaches a method of making a honeycomb structure comprising a step of kneading raw material including a ceramic raw material and a processing aid such as binder to prepare a clay body (see translation, col. 3, lines 10-30). Otsuka also teaches that cordierite ceramic material and silicon carbide ceramic material both can be used as the main component for making honeycomb structure. Silicon carbide is preferable from the viewpoint of thermal resistance (see translation, col. 5, lines 25-45).

Therefore, it would have been obvious to one of ordinary skill in the art to use silicon carbide as a main component for forming honeycomb in order to provide the honeycomb structure with better thermal resistance.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1794

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyakawa et al. (US 2004/0115392).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Miyakawa discloses a method for manufacturing a silicon carbide (page 2, [0027]) based honeycomb structure comprising adding to a raw material for forming a honeycomb body structure, a crushed green body obtained by crushing a green body having substantially the same composition as the compounded mixture for forming a green body into the maximum particle diameter of 50 mm or smaller (page 7, [0082]). The crushed green body is added in an amount of 30% or less by mass of a whole starting raw material.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Art Unit: 1794

6. Claims 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lu et al. (US 2003/0057581).

The claimed subject matter recited in claims 6-7 is a silicon carbide based honeycomb structure.

Lu discloses a silicon carbide honeycomb structure comprising silicon carbide powder with a median particle size of about 10-40 micrometers (page 4, [0040]).

Claims 6-7 are product-by-process claims. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

In this case, Lu discloses the same silicon carbide based honeycomb structure as claimed. Accordingly, Lu anticipates the claimed product limitations even through the product disclosed by Lu is made by a different process.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asami et al. (US 4,851,376) in view of Otsuka et al. (WO 03/048073, see its US equivalent, U.S. Pat. No.7,208,108, for translation).

Regarding claims 1-2 and 6, Asami discloses a method for producing a honeycomb structure by using a recycled raw material from a recovered material generated in a process for making other honeycomb structure. The recovered material can be crushed and milled or ground by different methods (col. 10, lines 20-67) so that the recycled raw material has an average particle diameter of 50 mm or less (col. 10, lines 15-45). The recycled raw material can be mixed with a fresh mass of raw material (col. 8, lines 60-67). The mixture comprises about 2.5% to 100% by weight of the recycled raw material (col. 9, lines 1-10). The prepared starting material is used to form a desired formed body by an extrusion, press, forming rolls or other suitable equipment and methods known in the art (col. 9, lines 10-25).

Art Unit: 1794

Regarding claims 3-5 and 7, Asami discloses that a method of making honeycomb structure by using a recycled raw material without applying mechanical impacts to the material (col. 8, lines 45-50). Water is added to the recycled raw material (col. 8, lines 45-55). The recycled raw material can be mixed with a fresh mass of raw material (col. 8, lines 60-67). The mixture may comprise about 2.5% to 100% by weight of the recycled raw material (col. 9, lines 1-10). The prepared starting material is used to form a desired formed body by an extrusion, press, forming rolls or other suitable equipment and methods known in the art (col. 9, lines 10-25), for example, the starting material was kneaded to formed a paste (kneaded clay) (col. 12, lines 55-67) and a binder is added to the starting material (col. 15, lines 10-15).

Asami discloses that the honeycomb is made of cordierite ceramic material. Asami does not specify that the honeycomb is made of silicon carbide ceramic material.

Otsuka teaches a method of making a honeycomb structure comprising a step of kneading raw material including a ceramic raw material and a processing aid such as binder to prepare a clay body (see translation, col. 3, lines 10-30). Otsuka also teaches that cordierite ceramic material and silicon carbide ceramic material both can be used as the main component for making honeycomb structure. Silicon carbide is preferable from the viewpoint of thermal resistance (see translation, col. 5, lines 25-45).

Therefore, it would have been obvious to one of ordinary skill in the art to use silicon carbide as a main component for forming honeycomb in order to provide the honeycomb structure with better thermal resistance.

Art Unit: 1794

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ling Xu
Primary Examiner
Art Unit 1794

/Ling Xu/
Primary Examiner, Art Unit 1794

Lx
September 19, 2008